REMARKS

I. OBJECTION TO THE CLAIM WORDING

New claims 19 to 40 have been filed and the original claims 1 to 18 have been canceled.

The new claims include a single independent device claim 19 and a single independent method claim 32.

The independent claims each have a colon following their preamble and a semicolon following each claim element.

The use of the plural and singular has been checked in the new claims and is believed to have been consistently used. Also the objection to claim 16 is obviated by its cancellation.

It is thus respectfully submitted that the wording of the new claims 19 to 40 cannot be objected to for the same reasons as set forth in paragraph 2 on page 2 of the Office Action.

II. INDEFINITENESS REJECTION

Claims 1, 7, 13, and 16 were rejected as indefinite under 35 U.S.C. 112, second paragraph.

The two new independent claims are not limited to the use of laser beams. On the other hand, new dependent device claim 20 and dependent method claims 39 and 40 limit the light beams to laser beams.

Similarly the new claims do not contain terms such as "particularly" or "in particular", which render claim scope uncertain. Nevertheless the new claims contain the same subject matter as claims 1 to 18, but with more limitations in the independent claims, since additional dependent claims have been added to include the subject matter not included in the independent claims.

Accordingly there should be no uncertainty regarding the scope of the new independent and dependent claims.

New dependent device claim 27 replaces canceled device claim 7, which indeed was indefinite regarding a particular orientation of the detectors. New claim 27 states that the detectors 11, 12 have respective sensor surfaces and are oriented so that the sensor surfaces are facing each other and perpendicular to the front surface (8) of said transparent sample (2). These limitations are supported by the paragraph starting at line 26 of page 11 of the applicants' originally filed specification. The detectors can be CCD cameras or line cameras that can determine the position at which a light beam impinges on their sensor surfaces. Thus the preferred orientation of the detectors is a device limitation and has been claimed definitely in claim 27 in a manner supported by the specification.

Dependent method claims 34 and 35 replace claim 13, which was also rejected as indefinite. Dependent method claim 34 only limits the first and second

incident angles to angles that are equal to each other -- in principle they could be any value (although there are practical limitations regarding small incidence angles at which almost total reflection from the front surface would occur and also at angles near 90°). Dependent claim 35 claims the preferred embodiments in which the absolute value of these angles is 45°.

New dependent claim 37 replaces canceled dependent claim 16. New claim 37 states that the spacing between the reflected light beam L3' and the reflected light beam L1' or L2' is used to determine the curvature. The reflected light beam L1', L2'or L3' is a light beam that is produced by reflection of a part of incident light beam L1, L2, or L3 respectively by the front surface 8 of the transparent sample 2. The wording of claim 37 is selected to make the aforesaid features of this preferred embodiment clear and definite.

In addition, all the new claims 19 to 40 have been checked to make certain that antecedent basis of claim terms has been maintained throughtout the claims.

For the aforesaid reasons it is respectfully submitted that **none** of the new claims 19 to 40, especially claims 19, 27, 34, 35, and 37, should be rejected as indefinite under 35 U.S.C. 112, second paragraph, for the reasons in paragraphs 4 and 5 on pages 2 to 4 of the Office Action.

III. SUPPORT FOR THE SUBJECT MATTER OF THE CLAIMS

The subject matter of new claims 19 to 40 is for the most part present in the original claims 1 to 18 with the exception of some additional limitations. This section describes additional support for the latter additional limitations in the claims that is found in the applicants' originally filed specification.

The new independent device claim states that the third incident light beam is parallel to the first or the second incident light beam. The term "substantially parallel" is no longer used in any device claim. Support for this change in wording is found on page 3, lines 9 to 14, of the applicants' originally filed specification. In contrast, the method claims retain the terminology "substantially parallel", but attention is called to the definition of the scope of "substantially parallel" on page 7 at line 22 of the English translation of the specification.

The fourth and fifth paragraphs of the body of new device claim 19 are expanded versions of the fourth paragraph of canceled device claim 1 that provide a more complete description of the origin and manner of production of the reflected light beams. Also these paragraphs limit the claimed device to detectors that perform the stated functions. The wording of the fourth and fifth paragraph of claim 19 is supported by the disclosure in the paragraph between lines 14 and 24 of page 11 of the specification, which states that the incident beams L1 and L2 are partially reflected (at the front surface 8) as reflected laser beams L1' and L2' and that the portions of these beams entering the glass strip

is partially reflected at the rear surface 13 to form the reflected beams L1" and L2". Page 11, lines 30 to 35, state that the detector 11 or 12 collects reflected beams L1' and L1" and/or reflected beams L2' or L2". The statement regarding the determination of the positions of these reflected light beams is supported by page 11, lines 35 to 37, also page 12, lines 25 to 30, of the applicants' originally filed specification. The spacing for the reflected beams is related to the position data for the reflected beams according to page 14, lines 10 to 15, of the specification.

The subject matter of the third paragraph of the body of claim 19 was originally in the fifth paragraph of canceled claim 1.

The last paragraph of claim 19 was originally the last paragraph of canceled claim 1, but has been reworded somewhat.

New independent method claim 32 replaces canceled method claim 11 and contains changes similar to the changes made in drafting the independent device claim 19.

First independent method claim 32 no longer depends on a device claim.

Second the first two paragraphs of the body of claim 32 contain subject matter that is similar to subject matter included in the first, second and fourth paragraphs of the body of new device claim 19 and is supported by the same sections of applicants' originally filed specification that support the first, second and fourth paragraphs of the body of new claim 19, which are noted herein above.

The next-to-last paragraph of new method claim 32 contains subject matter similar to the third paragraph of claim 19, but uses the term "substantially parallel", which is supported by applicants' specification (page 7) and the original claims.

The paragraphs in claim 32 regarding the thickness measurement, the inclination angle or wedge angle correction and the curvature correction are supported by the fourth and sixth paragraphs of canceled claim 11 and by canceled claim 16 and also by page 14, line 17, to page 18, last line, of the applicants' originally filed specification.

Also some of the features in new claim 19 are supported by the description on page 6, line 24 to page 7, line 16 of the originally filed U.S. specification. Some of the features of new claim 11 are supported by the disclosures on page 16, line 15 to page 17, line 2 and lines 14 to 21, of the applicants' specification.

The dependent device and dependent method claims contain the subject matter from the canceled device and canceled method claims but have been rewritten to avoid antecedent basis errors and other wording that can cause a rejection of the claims as indefinite.

It is respectfully submitted that the new claims are fully supported by the original disclosure including specification and claims, which were filed on the filing date of the above-identified U.S. Patent Application.

IV. DEVICE CLAIM REJECTIONS

Claims 1 to 8 and 10 were rejected as anticipated under 35 U.S.C. 102 (b) by Bredberg, et al, U.S. Patent 5,442,573 (called "Bredberg" herein below).

Claim 9 was rejected as obvious under 35 U.S.C. 103 (a) over Bredberg, et al, U.S. Patent 5,442,573.

New device claims 19 to 31 replace canceled device claims 1 to 10.

Bredberg discloses an apparatus for non-contact measurements of position, thickness and surface characteristic of a sample. For those purposes the apparatus of the embodiment shown in figure 6 comprises two light sources 50 and 60, which produce light beams 51 and 61 on opposite sides of the sample 20 whose thickness is to be measured (see figure 6). The beam splitters 52 and 62 split each of the light beams 51 and 61 into first and second partial beams. The beam splitters 52 and 62 and the reflectors 54 and 64 are arranged and aligned so that first and second beams from the light beams 51 and 61 converge at respective reference points 55 and 65 on opposite sides of the sample 20 but on a line 72, which is also the optic axes of the respective detectors comprising lens system 56 and 66 and photo sensor arrays 58 and 68.

The photo sensor arrays 58 and 68 of the detectors of Bredberg detect the relative positions and the brightness of the reflected light from impact points 53 and 57 and impact points 63 and 67 respectively using the method described in column 4, lines 22 to 52, with regard to figure 1. The reflected light is reflected in

both cases only by the respective front or facing surfaces of the sample 20, i.e. the surfaces closest to the detectors, since the impact points are situated on the respective front or facing surfaces. According to the equation (1) disclosed in column 5, line 15, the thickness 7" of the sample 20 can be determined using those data.

The structure and operation of the detectors of Bredberg is explained in column 5, line 4, to column 7, line 3, of Bredberg, with reference to figs. 3 and 4 of Bredberg. The detectors include camera lens 30 as shown in fig. 4 or a lens system in general. The detectors of Bredberg with this focusing device are each arranged to focus the image of the bright spots 25, 23 (with respect to the embodiment of fig. 1 -- but the principle is the same for fig. 6), which are produced by the incident light beams on the front or facing surface of the sample, on the sensor array of the respective detector. In other words, the bright spots imaged on the sensor array comprise light that originates from one and the same plane, i.e. the surface of the sample that is closest to or faces the detector.

In contrast, the applicants' detectors and hence the applicants' claimed device are different. They are different because they do not detect light from a single plane of the sample on a sensor array. Instead the sensor array of the applicants' detector detects the position of a partially reflected light beam from the front surface of the sample **and** another partially reflected light beam from a rear surface of the sample, i.e. a surface that is behind the front or facing surface. The applicants' detector claimed in new claim 19 determines a spacing d' between both the reflected beams from the distance M between the positions

of the reflected beams on the sensor array. The thickness of the sample may then be calculated in the simplest case without any wedge angle or curvature corrections, e.g. in an evaluating device connected with the detector, according to the formula on line 20 of page 14 of the U.S. specification.

Since the applicants' detectors which measure the positions of reflected light beams from different planes of the sample, i.e. the front surface and the rear surface, are structurally different from the detectors of Bredberg, which only detect light from a single sample plane, the claimed device according to new claim 19 is different from the device disclosed in Bredberg.

Column 8, lines 44 to 47, of Bredberg explains that the advantage of the two-side illumination of the embodiment of fig. 6 with the two detectors and light sources on opposite sides of the sample in comparison to the embodiment in fig. 1 of Bredberg in which there is only one detector and one light source on only one side of the sample is that the embodiment of fig. 6 allows the thickness of the sample 20 to be calculated accurately, even if the sample 20 moves vertically relative to the points of coincidence 55 and 65 of the converging light beams on opposite sides of the sample.

In contrast to the above-described device of Bredberg, the claimed device of new claim 19 comprises three different light beams, which are incident on the sample from only one side, namely the front side. All three incident light beams fall on the front or facing surface side of the sample. According to new claim 19 two of these three light beams are arranged to produce a reflected light beam

from the front surface of the sample by partial reflection and, after the remaining part of the incident beam is refracted in the sample, a second reflected light beam from the rear surface of the sample. All three different light beams according to claim 19 pass from the front side to the rear side of the sample first producing a reflected beam from the front surface and then producing another reflected beam from the rear surface. Thus all three light beams must originate on one and the same side of the sample.

One advantage to the applicants' arrangement of light beams in contrast to that of the embodiment of fig. 6 of Bredberg is that all the detectors and light beams are located on one side of the sample. In practice e.g. during glass sheet production the opposite side of the sample is not accessible in some cases.

Another difference between the device claimed in new applicants' claim 19 and that of Bredberg is that **one** of the two detectors, according to the last paragraph of claim 19, detects the positions of three reflected beams on its sensor array, for example the position of the reflected light beam (L3') produced by reflection of the third incident light beam and the positions of the reflected light beams (L2', L2") produced by partial reflection of the second incident beam (L2) from the front and rear surfaces of the sample.

It is well established that each and every limitation of a claimed invention must be disclosed in a single prior art reference in order to be able to reject the claimed invention under 35 U.S.C. 102 (b) based on the disclosures in the single prior art reference. See M.P.E.P. 2131 and also the opinion in ***In re Bond***, 15 U.S.P.Q. 2nd 1566 (Fed. Cir. 1990).

Summarizing, the device claimed in claim 19 is different because

(1) detectors 11, 12 of claim 19 are different from the detectors of Bredberg because they measure the respective positions of reflected light beams produced by reflection from two different plane surfaces in the sample, whereas the detectors of Bredberg measure the distance between the bright spots on a single facing surface of the sample;

(2) the incident light beams and detectors of claim 19 are necessarily on only one side of the sample, whereas the detectors and incident light beams of the embodiment of fig. 6 of Bredberg are on opposite sides of the sample; and

(3) one detector according to claim 19 measures the respective positions of three reflected light beams, e.g. (L1', L1", L3'), produced by reflection from two surfaces of the sample (front and rear), whereas the detectors of Bredberg measure the relative positions of only two bright spots from a single facing surface of the sample.

It is respectfully submitted that the dependent device claims 20 to 31 are not anticipated by Bredberg because they depend on and thus include the subject matter of claim 19.

Furthermore Bredberg teaches the opposite from the subject matter of applicants' new dependent claim 27 because the sensor arrays of Bredberg's detectors are all oriented parallel with the front surface of their sample, whereas the applicants' sensor arrays are perpendicular to the front surface of the sample.

For the aforesaid reasons it is respectfully submitted that new device claims 19 to 31 should not be rejected as anticipated under 35 U.S.C. 102 (b) by Bredberg, et al, U.S. Patent 5,442,573.

As far as the question of obviousness goes, the differences between the structure of the device claimed in applicants' claim 19 and that of Bredberg would **not** be obvious to one of ordinary skill in the art. The structure of the applicants' detectors is not obvious from the structure of the detectors of the device of Bredberg because a detector that focuses the image on a single plane of a sample on its sensor array cannot at the same time function to measure the positions or spacing of two different reflected light beams from two different surfaces, i.e. front and rear surfaces of the sample.

Thus Bredberg teaches the opposite from the applicants' detectors. Bredberg teaches that the detector should image light from a single plane of the sample, whereas applicants' teach that the detector should collect light from two different planes of the same and measure the relative position of beams from the two different sample planes.

A reference that teaches the opposite from a claimed invention cannot be used to reject a claimed invention under 35 U.S.C. 103 (a). See M.P.E.P. 2145. X and also the Federal Circuit Court of Appeals has said:

> "That the inventor achieved the claimed invention by doing what those skilled in the art suggested should not be done is a fact strongly probative of nonobviousness." in ***Kloster Speedsteel AB v. Crucible Inc.,*** 230

U.S.P.Q. 81 (Fed. Cir. 1986), on rehearing, 231 U.S.P.Q. 160 (Fed. Cir. 1986).

Furthermore the claimed device of claim 19 is different from the device of fig. 6 shown in Bredberg. Even if the device of claim 19 and the prior art are considered to measure the same parameters, such as thickness of the sample, that does not mean that they necessarily have the same structure or operate in the same way.

One skilled in the art would have no reason to modify the device shown in fig. 6 of Bredberg to arrive at the device claimed in claim 19. One skilled in the art would simply use the devices disclosed by Bredberg e.g. to measure the thickness.

It is especially important to remember that the statute requires that the source of the reason for modifying the prior art disclosures cannot be derived from the applicants' specification. For example, the Federal Circuit Court of Appeals has said:

> "As in all determinations under 35 U.S.C. 103, the decision-maker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selected elements from references to fill the gaps". ***In re Gorman***, 18 U.S.P.Q.2d 1885 (Fed. Cir. 1991).

Furthermore the Office Action has not offered any reasons to support an obviousness rejection at this point. This situation is perfectly understandable because the differences between the claimed device of new claim 19 and the

device of Bredberg have not been considered at this time.

In addition, with respect to new claim 27 Bredberg clearly teaches the **opposite** regarding the orientation of the sensor arrays of the detectors.

For the aforesaid reasons it is respectfully submitted that new device claims 19 to 31 should not be rejected as obvious under 35 U.S.C. 103 (a) over Bredberg, et al, U.S. Patent 5,442,573.

V. OBVIOUSNESS REJECTION OF THE METHOD BASED ON BREDBERG

Method claims 11 to 15 were rejected as obvious under 35 U.S.C. 103 (a) over Bredberg, et al, U.S. Patent 5,442,573.

New independent method claim 32 replaces canceled method claim 11.

The new independent method claim 32 includes additional limitations regarding the details of the curvature correction and of the inclination correction or the wedge angle correction, which were not present in the original method claim 11. These additional limitations regarding the curvature correction and the inclination or wedge angle correction are **not** obvious from the disclosures in Bredberg.

In fact, the features of canceled claim 16 have been included in the last paragraph of the new claim 32 so that claim 32 now includes the combined

subject matter from both canceled claim 16 and claim 11. For that reason claim 32 avoids a rejection for obviousness based on Bredberg alone because the first paragraph of page 13 of the Office Action admits that claim 16 is not obvious from Bredberg alone.

Furthermore Bredberg only discloses measuring warpage, i.e. the difference of a surface of the sample from planarity according to column 9, line 57, to column 10, line 5. To measure warpage the measurement devices of Bredberg's fig. 1 are spaced from each other lengthwise and optionally widthwise over the sample but must be arranged so that the coincidence points of the laser beams lie in the same horizontal plane as shown in fig. 7 (column 9, lines 62 to 64). In the method of Bredberg illustrated in figure 7 **six** incident light beams from three devices according to fig. 1 are required to determine curvature. In contrast, the curvature determination of the invention is substantially simpler and can be performed by a simpler device with fewer parts when two comparatively closely spaced substantially parallel incident beams are directed to a comparatively small region of the front surface of the sample and the spacing of the reflected beams is determined (that spacing is greater when the curvature at the area on the sample on which the two beams are incident is greater).

Another difference of the applicants' invention and the method of Bredberg is that, in the case of the applicants' invention, at least the first and the third beam or the second and the third beam detect approximately the same area of the sample using only one device (i.e. one detector). In contrast to that arrangement it appears that the embodiment of figure 7 of Bredberg involves the

measurement of the height of the surface of the sample at three comparatively widely spaced apart positions of the sample surface with three different devices 80, 82 and 84.

A sample with an undulating surface would be difficult for the device of Bredberg to handle because the curvature would oscillate in the longitudinal direction. It is even conceivable that an undulating or wave shaped surface would appear to be flat when using the arrangement or method of fig. 7 of Bredberg with the spaced apart surface height detectors if the peaks of the undulations matched the distance between the measurement devices.

One skilled in the art would have no reason to modify the method of determining warpage according to fig. 7 of Bredberg to arrive at the method claimed in claim 32 including the details of the measurement of the curvature of the sample surface from canceled claim 16.

It is especially important to remember that the statute requires that the source of the reason for modifying the prior art disclosures cannot be derived from the applicants' specification. For example, the Federal Circuit Court of Appeals has said:

> "As in all determinations under 35 U.S.C. 103, the decision-maker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selected elements from references to fill the gaps". ***In re Gorman***, 18 U.S.P.Q.2d 1885 (Fed. Cir. 1991).

For the aforesaid reasons it is respectfully submitted that new method claims 32 to 40 should **not** be rejected as obvious under 35 U.S.C. 103 (a) over Bredberg, et al, U.S. Patent 5,442,573.

VI. OBVIOUSNESS OF THE METHOD BASED ON A COMBINATION OF BREDBERG AND CATON

Dependent method claims 16 to 18 were rejected as obvious under 35 U.S.C. 103 (a) over Bredberg, et al, U.S. Patent 5,442,573, and further in view of Caton, et al (called "Caton" herein below).

The subject matter of method claim 16 has been included in the new independent method claim 32. Claim 16 has been canceled accordingly. New dependent claims 37 and 38 include the subject matter of canceled claims 17 and 18 respectively and depend on claim 32.

Bredberg and its relationship to the method claimed in the new method claims have been described above.

Caton describes a method and apparatus for measuring a thickness of a layer and/or variations in layer thickness for layers that are flat, curved or have curves without contact.

Paragraph [0033] of Caton teaches that the determination of thickness is made by a combination of an eddy current measurement and a laser measurement. In particular, the eddy current sensor measures a distance 170

between an eddy current device 132 with a sensor 136 and a substrate surface 169 on which there is a top layer 162 (see figs. 1 and 2 and paragraphs [0035] and [0036]).

Additionally, a laser source 140 is used to determine the distance 172 between the top surface 160 of the top layer 162 on the substrate 166. The distance 172 is determined from the light which is reflected back by the front surface 160 of layer 162 to the laser source 140 by signal processor 150 (paragraph [0037]), which perhaps could use the fact that light travels at a about a nanosecond per foot or some other physical property of the laser light. From the difference between the distances 172 and 170, the thickness of the layer 162 is determined (see paragraphs [0036] to [0038]).

With regard to Caton, the Office Action refers in particular to the disclosure in paragraph [0054] and figure 6. There, the curvature of a layer surface 306 is determined by measuring several distances 342, 344, and 346 between an apparatus 300 and several spaced apart points on a top surface 306 of the top layer 302. The several distances 342, 344, and 346 are measured by sweeping a laser beam 327 across the sample to the several spaced apart points and detecting the reflected laser radiation from the top surface 306 of the top layer 302 in the manner described for the embodiment shown in fig. 2.

Caton also provides some guidance regarding the angles between the laser beams when they impinge on the several spaced apart points on the top surface 306. According to paragraph [0053] this angle may be e.g. 10° or even 30°. In contrast, applicants' claim 32 requires that their two incident, spaced-

apart laser beams L3, L1 or L3, L2 for measurement of the curvature must be *substantially* parallel.

According to page 13 of the Office Action "substantially" is a broad term (M.P.E.P. 2173.05 (b)), but it is respectfully submitted that one skilled in the art of guiding laser or light beams would **not** consider two beams that are at an angle of between 10° to 30° as substantially parallel.

Furthermore "substantially parallel" can only be interpreted broadly if there is no guidance in the applicants' specification regarding the scope of "substantially parallel" (but there is such guidance). The applicants' originally filed specification states that "substantially parallel" means that the two beams are parallel within the accuracy to which their relative orientations can be adjusted (on page 7, line 22). Since this adjustment accuracy for beam orientation would typically be within a few degrees, it should be clear that Caton does **not** disclose determining curvature using the spacing between reflected beams (L3', L1' or L3', L2') produced by partial reflection of two spaced-apart incident light beams (L3, L1 or L3, L2), which are substantially parallel to each other.

The use of two closely spaced apart parallel or nearly parallel incident light beams facilitates an accurate determination of the local curvature in a localized region of the surface on which the incident light beams fall because the incident beams are comparatively close together. Curvature is simply and easily detected when the spacing between the reflected beams from the surface differs from the spacing expected for a flat reflecting surface, which is s / cos α, where s is the spacing between the incident beams and α is the angle by which the beams

strike the tangential surface in their area of incidence (see page 13, lines 8 to 13, and fig. 5 of applicants' specification).

Thus the use of parallel or nearly parallel incident beams with a known spacing s between provides an important simplification in the detection of curvature in the front surface and measurement of the radius of curvature of the front surface.

Furthermore paragraphs [0053] and [0054] of the Caton reference disclose producing the reflected beams by "sweeping" a single laser, i.e. by pivoting the laser that produces the laser beam or the beam across the sample surface. Such an arrangement cannot produce two incident substantially parallel beams that are simultaneously incident on the sample and that produce side-by-side reflected beams. In the case of the Caton reference there is only a single incident laser beam that is moved from position-to-position along the front surface and it only reflects a single incident reflected beam to the detector at any given time. The processor of Caton must calculate the distances to the surface as the laser beam is "swept" across the surface or remember the intermediate results for each angular position of the laser beam. In contrast in applicants' claimed method of claim 32 two incident side-by-side substantially parallel beams are simultaneously incident on the front surface of the sample and the spacing between the reflected beams is measured, which is entirely different from the beam sweep method described in Caton.

In addition, in contrast to the last paragraph on page 13 of the Office Action Caton does not measure the spacing, i.e. a distance, between the

reflected beams. There is no disclosure of this feature in Caton. The spacing, as defined in applicants' specification, is the distance between two reflected beams that are simultaneously present as shown in fig. 5. In Caton the laser beam only measures the distance or distances to the point or points of impingement on the surface and there is only a single incident beam present at any given instant during the sweep of the laser beam.

With respect to the other features of method claim 32 the essence or essential features of the presently claimed method are the use of reflected light beams from both the front surface and the rear surface of a transparent sample in order to determine the thickness of the sample and to use these reflected light beams and the reflected beam from a third incident light beam substantially parallel to one of the two other incident light beams for determination of an inclination angle and/or wedge angle correction.

None of the above features, especially those related to the measurement of the curvature and the curvature correction, which are admittedly lacking in the disclosure of Bredberg, would be obvious from the disclosures of Caton to one of ordinary skill in the art.

Sufficiently valid reasons that show that one skilled in the art would modify the combined disclosures of Bredberg and Caton to arrive at the method as claimed in applicants' new method claim 32 must be presented in the next Office Action if new method claim 32 is to be rejected based on the disclosures of Bredberg and Caton.

For example, the Board of Patent Appeals repeatedly citing the KSR Supreme Court decision and *In re Kahn* has said:

> "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (*In re Kahn*, 441 F. 3rd 977, 988).

The underlining for emphasis is ours. It is respectfully submitted that logically cogent reasons for the obviousness of the combined subject matter of the new method claims 32 to 40 have yet to be presented and that the prior reasons for rejecting method claims 11 to 31 are not applicable to the new method claims 32 to 40.

For the aforesaid reasons it is respectfully submitted that **none** of new method claims 32 to 40 should be rejected as obvious under 35 U.S.C. 103 (a) over Bredberg, et al, U.S. Patent 5,442,573, and further in view of Caton, et al.

VII. SPECIFICATION CORRECTIONS

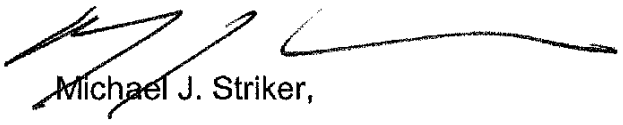
The formulae on page 16, lines 22 to 35, in the originally filed English translation of the specification of the PCT application (i.e. the specification of the above-identified U.S. National Stage application) were unfortunately incorrect because "α" should have been "a", which is an obvious error, whose correction does not introduce new matter. See M.P.E.P. 2163.07 under "obvious errors".

In addition, the "+" sign in front of "2σ" was changed to a minus sign. That this change did not introduce new matter can be ascertained by checking the same formula in the original German language version of PCT/EP 2004/014560, since even someone who is not familiar with the German language can read the mathematical formulae in the PCT application, which use the same symbols as in the above-identified U.S. National stage application.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549-4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,



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